

August 30, 2010

Via Email and Xpresspost

Richard Dwyer  
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**Re: Water License 2AM-MEA0815 July Monitoring Program Summary Report**

As required by Water license 2AM-MEA0815 Part I Item 25, please find the July 2010 Monitoring Program Summary Report enclosed.

Should you have any questions regarding this submission, please contact me directly at 819-763-0229 or via email at [stephane.robert@agnico-eagle.com](mailto:stephane.robert@agnico-eagle.com).

Regards,



Stéphane Robert,  
Environment Superintendent

*Encl*

cc: Lou-Ann Cornacchio, INAC  
David Abernethy, INAC  
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Stephen Hartman, KIA



## MEADOWBANK GOLD PROJECT

# **Monitoring Program Summary Report**

**July 2010**

Type A Water License 2AM-MEA0815

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## **SECTION 1 • BACKGROUND**

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As required under Part I, Item 25 of Type A Water License 2AM-MEA0815, this report documents the water management and monitoring activity at the mine site for the month of July 2010. This activity includes: water usage and sewage treatment plant, dewatering and dike construction monitoring.

Additionally, a summary of the AEM internal spill reporting for the month is included.

## SECTION 2 • WATER MANAGEMENT

### 2.1 WATER USAGE

Freshwater usage for the month totals 96,683 m<sup>3</sup> and is summarized in Table 2.1 below. The consumption of fresh water for the mill and dust control was 93,898 m<sup>3</sup> and the consumption of reclaim water was 231,471 m<sup>3</sup>. The annual consumption of fresh water (709,434 m<sup>3</sup> vs 700,000 m<sup>3</sup>) was exceeded in July. An amendment to the License will be sent in beginning of September.

**Table 2-1: July 2010 Freshwater Usage**

	<b>Water usage (m<sup>3</sup>)</b>
Camp	2,607
Batch Plant	0
Mill & Dust control	93,898
Emulsion Plant	178
<b>Total for the site</b>	<b>96,683</b>

### 2.2 SEWAGE TREATMENT PLANT MONITORING

Four water samples were taken at the effluent of the sewage treatment plants (STP). The results showed the two systems are working well.

**Table 2-2: July 2010 STP Effluent Results**

<b>Parameter</b>	<b>05-Jul-10</b>	<b>12-Jul-10</b>	<b>19-Jul-10</b>	<b>27-Jul-10</b>
NH3-NH4 (mg/L)	21.7	23.6	15.5	24.7
BOD-5 (mg/L)	14	23	5	8
COD (mg/L)	89	107	94	99
TSS (mg/L)	28	28	20	18
NO2-NO3 (mg N/L)	48.2	38.9	40.7	38.8
pH (mg/L)	3.93	6.71	5.44	6.38
P tot (mg P/L)	13.9	15.0	15.0	16.7
Fecal Coliform (UFC/100mL)	28	96	4	128
Total Coliform (UFC/100mL)	< 10 000	5000	2,800	< 10,000
Atypical Colony (UFC/100mL)	890 000	68000	7,800	> 2,000,000

## 2.3 DEWATERING OF SECOND PORTAGE ARM

Water quality monitoring for the Second Portage Arm dewatering project continued throughout July.

The pH and Aluminum concentrations at the outlet of the TSS treatment plants were as follows:

- pH 24 hour minimum/maximum: 5.93/7.23 units (Limit is 6-9 units)
- Al 24 hour maximum concentration: 0.880 mg/L (Limit is 1.5 mg/L)

pH was below the license limit on July 19, 2010, at 5.93. At the same time of the monitoring on July 19, the pH was taken in the field by the environment technician and the value was 6.3. Table 2.3 summarizes the July dewatering monitoring results for pH and Aluminum.

**Table 2-3: July 2010 Dewatering Monitoring – pH and Al**

Date	DD-WTP-01		DD-WTP-02		Both WTP Outlets	
	pH	Total Al	pH	Total Al	pH 24-hour Mean	Al 24-hour Mean
	units	mg/L	units	mg/L	units	mg/L
2010-07-05			7.23	0.483	7.23	0.483
2010-07-07						
2010-07-12			6.88	0.418	6.88	0.418
2010-07-14						
2010-07-19			5.93	0.251	5.93	0.251
2010-07-21						
2010-07-26			6.07	0.880	6.07	0.880

The turbidity and Total Suspended Solids (TSS) concentrations at the outlet of the TSS treatment plants were as follows:

- NTU 24 hour mean maximum concentration: 8.0 NTU (Maximum Limit is 30 NTU)
- TSS 24 hour mean maximum concentration: 36 mg/L (Maximum Limit is 22.5 mg/L)
- NTU 30 days mean concentration: 5.3 NTU (Maximum Limit is 15 NTU)
- TSS 30 days mean concentration: 10 mg/L (Maximum Limit is 15 mg/L)

The results demonstrate that on July 20 the 24-hour mean TSS concentration exceeded the license criteria (36 mg/L). An action plan is in place to avoid exceedance at the water Treatment plant. This action plan includes the hiring of a contractor to avoid turnover of labor and an audit and training by John Meunier. Table 2.4 summarizes the July dewatering monitoring results for turbidity and TSS.

Table 2-4: July 2010 Dewatering Monitoring – TSS and Turbidity

Date	DD-WTP-01(Out)		DD-WTP-02(Out)		Both WTP Outlets			
	24-hour Mean	Lab TSS	24-hour Mean	Lab TSS	NTU 24-hour Mean	TSS 24-hour Mean	NTU 30-day Mean	TSS 30-day Mean
	NTU	mg/L	NTU	mg/L	NTU	mg/L	NTU	mg/L
2010-07-01	Not in operation		No Sample					
2010-07-02	Not in operation		5.8	11	5.8	11	7.4	15
2010-07-03	Not in operation		3.7	11	3.7	11	7.4	15
2010-07-04	Not in operation		7.1	4	7.1	4	7.4	15
2010-07-05	Not in operation		8.0	13	8.0	13	7.5	15
2010-07-06	Not in operation		5.9	8	5.9	8	7.4	14
2010-07-07	Not in operation		5.5	13	5.5	13	7.4	14
2010-07-08	Not in operation		7.1	16	7.1	16	7.3	14
2010-07-09	Not in operation		Not in operation					
2010-07-10	Not in operation		7.1	14	7.1	14	7.4	14
2010-07-11	Not in operation		5.6	6	5.6	6	7.3	14
2010-07-12	Not in operation		4.8	4	4.8	4	7.1	14
2010-07-13	Not in operation		5.0	8	5.0	8	7.0	14
2010-07-14	Not in operation		3.5	2	3.5	2	7.0	13
2010-07-15	Not in operation		4.4	8	4.4	8	6.9	13
2010-07-16	Not in operation		4.9	14	4.9	14	6.7	13
2010-07-17	Not in operation		3.7	10	3.7	10	6.6	12
2010-07-18	Not in operation		4.2	11	4.2	11	6.5	12
2010-07-19	Not in operation		5.2	12	5.2	12	6.4	12
2010-07-20	Not in operation		3.3	36	3.3	36	6.2	13
2010-07-21	Not in operation		5.4	9	5.4	9	6.4	12
2010-07-22	Not in operation		4.7	9	4.7	9	6.3	12
2010-07-23	Not in operation		3.0	1	3.0	1	6.2	11
2010-07-24	Not in operation		2.3	5	2.3	5	6.1	11
2010-07-25	Not in operation		2.7	6	2.7	6	5.9	11
2010-07-26	Not in operation		2.4	4	2.4	4	5.7	10
2010-07-27	Not in operation		5.0	10	5.0	10	5.6	10
2010-07-28	Not in operation		5.9	11	5.9	11	5.5	10
2010-07-29	Not in operation		Not in operation					
2010-07-30	Not in operation		7.0	14	7.0	14	5.4	10
2010-07-31	Not in operation		7.3	14	7.3	14	5.3	10

## 2.4 DIKE CONSTRUCTION MONITORING

Construction and monitoring of Bay Goose dike began on July 14, 2010

The TSS concentrations for the Bay Goose dike construction were as follows:

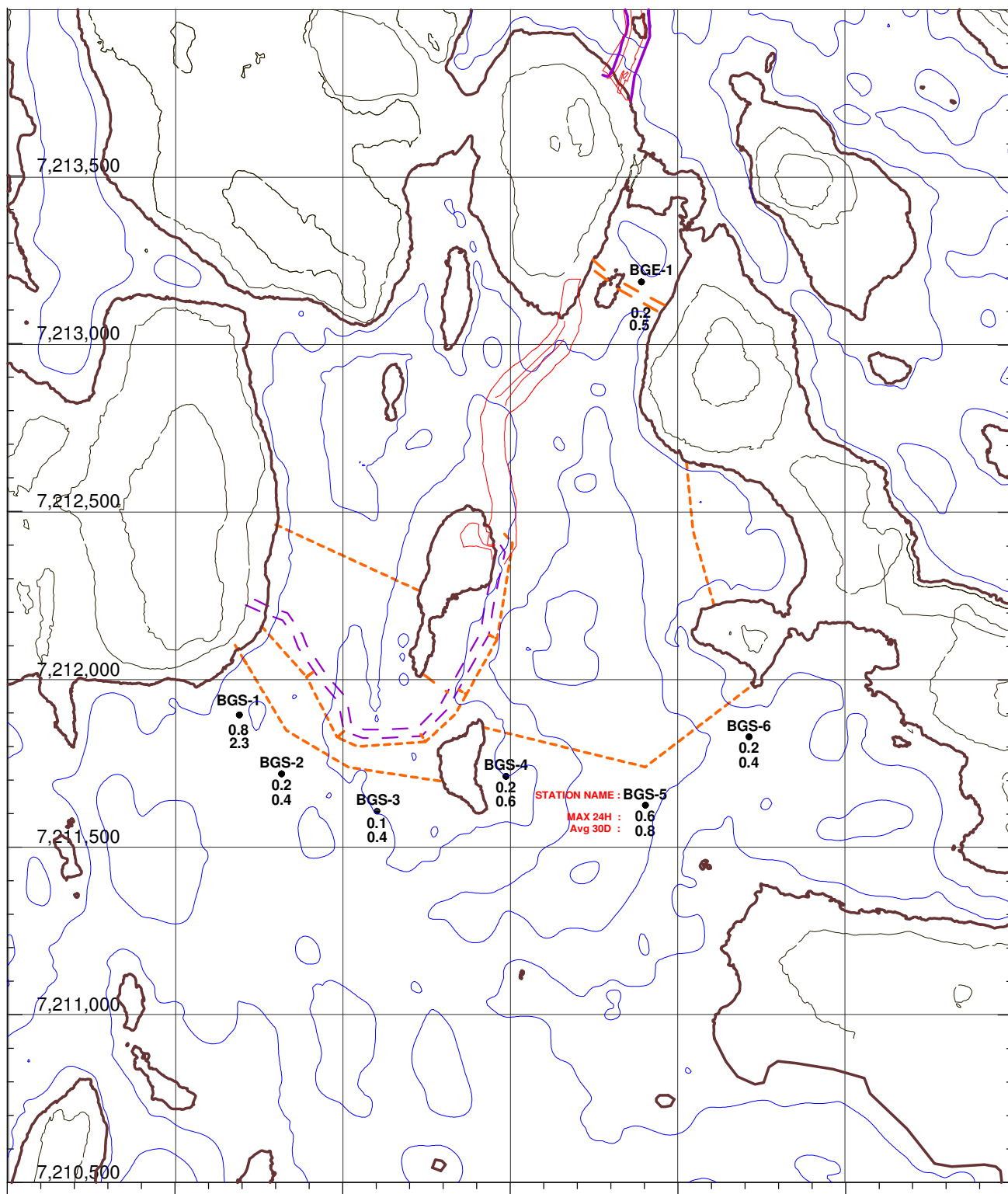
- Maximum short-term (24 hour) TSS concentration from monitoring stations BGE-1, BGS-1, BGS-2, BGS-5 and BGS-6 on the Bay Goose dike was 6.5 mg/L (Maximum Limit is 50 mg/L)
- Maximum short-term (24 hour) TSS concentration from monitoring stations BGS-3 and BGS-4 on the Bay Goose dike was 1.9 mg/L (Maximum Limit is 50 mg/L, after September 1 the Maximum Limit is 25 due to the proximity of High Value Habitat)
- Maximum 30 day mean TSS concentration from monitoring stations BGE-1, BGS-1, BGS-2, BGS-5 and BGS-6 on the Bay Goose dike was 4.4 mg/L (Maximum Limit is 15 mg/L)
- Maximum 30 day mean TSS concentration from monitoring stations BGS-3 and BGS-4 on the Bay Goose dike was 1.9 mg/L (Maximum Limit is 15 mg/L, after September 1 the Maximum Limit is 6 due to the proximity of High Value Habitat)

The July 2010 dike construction monitoring results are provided in Table 2.5 and the station locations are shown on Figure 1.



Table 2.5: July 2010 Dike Construction Monitoring Results

Date	BGE-1			Coordinates		BGS-1			Coordinates		BGS-2			Coordinates		BGS-3			Coordinates		BGS-4			Coordinates		BGS-5			Coordinates		BGS-6			Coordinates	
	Max NTU of day NTU	Max TSS of day mg/L	TSS 30 day Mean mg/L	Easting	Northing	Max NTU of day NTU	Max TSS of day mg/L	TSS 30 day Mean mg/L	Easting	Northing	Max NTU of day NTU	Max TSS of day mg/L	TSS 30 day Mean mg/L	Easting	Northing	Max NTU of day NTU	Max TSS of day mg/L	TSS 30 day Mean mg/L	Easting	Northing	Max NTU of day NTU	Max TSS of day mg/L	TSS 30 day Mean mg/L	Easting	Northing	Max NTU of day NTU	Max TSS of day mg/L	TSS 30 day Mean mg/L	Easting	Northing	Max NTU of day NTU	Max TSS of day mg/L	TSS 30 day Mean mg/L	Easting	Northing
2010-07-14	3.5	0.8	0.8	639,391	7,213,184	13.2	3.3	3.3	638,238	7,211,920	7.5	1.8	1.8	638,345	7,211,796	7.7	1.9	1.9	638,605	7,211,680	5.6	1.3	1.3	639,228	7,211,732	5.9	1.4	1.4	639,364	7,211,692	4.5	1.1	1.1	639,651	7,211,862
2010-07-18	2.9	0.7	0.8	639,391	7,213,184	21.1	5.4	4.4	638,238	7,211,920	4.9	1.2	1.5	638,345	7,211,796	3.3	0.8	1.3	638,605	7,211,680	4.7	1.1	1.2	639,228	7,211,732	3.7	0.9	1.2	639,364	7,211,692	3.1	0.7	0.9	639,651	7,211,862
2010-07-19	2.9	0.7	0.7	639,391	7,213,184	8.6	2.1	3.6	638,238	7,211,920	3.9	0.9	1.3	638,345	7,211,796	2.4	0.6	1.1	638,605	7,211,680	3.8	0.9	1.1	639,228	7,211,732	3.6	0.9	1.1	639,364	7,211,692	2.7	0.6	0.8	639,651	7,211,862
2010-07-20	2.8	0.7	0.7	639,391	7,213,184	25.1	6.5	4.3	638,238	7,211,920	4.2	1.0	1.2	638,345	7,211,796	2.4	0.6	0.9	638,605	7,211,680	2.9	0.7	1.0	639,228	7,211,732	6.0	1.5	1.2	639,364	7,211,692	2.6	0.6	0.8	639,651	7,211,862
2010-07-21	2.8	0.7	0.7	639,391	7,213,184	6.2	1.5	3.8	638,238	7,211,920	2.4	0.6	1.1	638,345	7,211,796	2.3	0.5	0.9	638,605	7,211,680	3.0	0.7	1.0	639,228	7,211,732	4.9	1.2	1.2	639,364	7,211,692	2.4	0.6	0.7	639,651	7,211,862
2010-07-22	2.4	0.6	0.7	639,391	7,213,184	11.1	2.8	3.6	638,238	7,211,920	2.5	0.6	1.0	638,345	7,211,796	2.7	0.6	0.8	638,605	7,211,680	3.0	0.7	0.9	639,228	7,211,732	4.4	1.1	1.1	639,364	7,211,692	2.3	0.5	0.7	639,651	7,211,862
2010-07-23	2.3	0.5	0.7	639,391	7,213,184	17.0	4.3	3.7	638,238	7,211,920	2.2	0.5	0.9	638,345	7,211,796	2.9	0.7	0.8	638,605	7,211,680	2.7	0.6	0.9	639,228	7,211,732	3.5	0.8	1.1	639,364	7,211,692	2.2	0.5	0.7	639,651	7,211,862
2010-07-24	2.1	0.5	0.6	639,391	7,213,184	14.0	3.5	3.7	638,238	7,211,920	2.3	0.5	0.9	638,345	7,211,796	1.9	0.4	0.8	638,605	7,211,680	2.8	0.7	0.8	639,228	7,211,732	3.7	0.9	1.1	639,364	7,211,692	1.8	0.4	0.6	639,651	7,211,862
2010-07-25	1.7	0.4	0.6	639,391	7,213,184	11.8	3.0	3.6	638,238	7,211,920	2.2	0.5	0.8	638,345	7,211,796	1.9	0.4	0.7	638,605	7,211,680	2.9	0.7	0.8	639,228	7,211,732	3.0	0.7	1.0	639,364	7,211,692	1.6	0.4	0.6	639,651	7,211,862
2010-07-26	1.8	0.4	0.6	639,391	7,213,184	9.8	2.4	3.5	638,238	7,211,920	1.3	0.3	0.8	638,345	7,211,796	1.7	0.4	0.7	638,605	7,211,680	4.2	1.0	0.8	639,228	7,211,732	2.6	0.6	1.0	639,364	7,211,692	1.5	0.3	0.6	639,651	7,211,862
2010-07-27	1.8	0.4	0.6	639,391	7,213,184	7.2	1.8	3.3	638,209	7,211,874	1.4	0.3	0.8	638,318	7,211,718	1.4	0.3	0.7	638,603	7,211,607	1.9	0.4	0.8	639,228	7,211,732	7.0	1.7	1.1	639,364	7,211,692	1.7	0.4	0.6	639,651	7,211,862
2010-07-28	1.5	0.3	0.6	639,391	7,213,184	2.6	0.6	3.1	638,192	7,211,894	1.0	0.2	0.7	638,318	7,211,718	1.5	0.3	0.6	638,603	7,211,607	1.8	0.4	0.8	638,987	7,211,711	1.2	0.3	1.0	639,403	7,211,625	1.5	0.3	0.5	639,712	7,211,828
2010-07-29	1.1	0.2	0.5	639,391	7,213,184	0.8	0.2	2.9	638,192	7,211,894	0.3	0.1	0.7	638,318	7,211,718	0.3	0.1	0.6	638,603	7,211,607	0.8	0.2	0.7	638,987	7,211,711	0.9	0.2	0.9	639,403	7,211,625	0.7	0.2	0.5	639,712	7,211,828
2010-07-30	1.2	0.3	0.5	639,391	7,213,184	2.6	0.6	2.7	638,192	7,211,894	0.6	0.1	0.6	638,318	7,211,718	0.6	0.1	0.6	638,603	7,211,607	1.0	0.2	0.7	638,987	7,211,711	2.1	0.5	0.9	639,403	7,211,625	1.0	0.2	0.5	639,712	7,211,828
2010-07-31	1.0	0.2	0.5	639,391	7,213,184	3.4	0.8	2.6	638,192	7,211,894	0.7	0.2	0.6	638,318	7,211,718	0.6	0.1	0.5	638,603	7,211,607	0.7	0.2	0.7	638,987	7,211,711	2.4	0.6	0.9	639,403	7,211,625	0.9	0.2	0.5	639,712	7,211,828



637,500 638,000 638,500 639,000 639,500 640,000 640,500

## NOTES:

FIELD READINGS BY AEM

REPORTED TSS IS THE MAXIMUM VALUE ALONG THE PROFILE

TURBIDITY-BASED ESTIMATES OF TOTAL SUSPENDED SOLIDS  
(TSS in mg/L)

LIMIT 24 HOURS : 50 mg/L

LIMIT 30 DAYS Avg : 15 mg/L

**AGNICO-EAGLE MINES LIMITED - MEADOWBANK DIVISION**

**BAY-GOOSE DIKE CONSTRUCTION**

**TSS MONITORING DURING CONSTRUCTION**

**DATE : 31-Jul-2010**

### SECTION 3 • SPILL MANAGEMENT SUMMARY

AEM has developed a system of tracking spills on-site. Table 3.1 summarizes the AEM internal spill reports for July. No spills were reported to the GN spill hotline.

**Table 3-1: Summary of July 2010 AEM Internal Spill Reports**

Date of Spill	Hazardous Material	Quantity	Location	Cause of spill	Clean-up action taken	Reported to Spill HotLine
2010-07-03	Oil	22 L	Junction of Goose dike and Goose road	equipment vibration unscrewed an oil plug on a shovel	Contaminated soil was put in 3 drums and taken to Hazmat area	N
Unknown; Unreported spill	Oil	unknown	Nahanni shop (construction maintenance)	Maintenance on machine	Contaminated soil was put in drums and taken to Hazmat area	N
Unknown; Unreported spill	Oil	unknown	Heavy equipment parking lot	Maintenance on machine	Contaminated soil was put in drums and taken to Hazmat area	N
Unknown; Unreported spill	Gas	unknown	Refueling station	secondary containment for small pipe placed on uneven ground; consequently leaked	Ground beneath containment area leveled; contaminated soil was put in drums and taken to Hazmat area	N
Unknown; Unreported spill	Fuel	unknown	Emulsion plant	leaking pipe	Contaminated soil was taken to Quarry 22; pipe is scheduled for repair	N
Unknown; Unreported spill	Drilling mud	unknown	Quarry	Cleaning drillers seacan	Contaminated soil was taken to Quarry 22	N
2010-07-09	Fuel	40 L	Bit shop near the Assay lab	Leak from Pick up truck (#7) fuel tank	Contaminated soil was put in drums and taken to Hazmat area	N
2010-07-10	Hydraulic Oil	10 L	Pipe Road near the airstrip	Broken hose	Contaminated soil was taken to Quarry 22	N
Unknown; Unreported spill	Oil	unknown	Between truck shop and Inukshuk statue	Maintenance on machine	Contaminated soil was taken to Quarry 22	N

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2010-07-18	Oil	2 L	Nunamiut Hotel Parking lot	loose oil filter	Contaminated soil was taken to Quarry 6	N
2010-07-18	Oil	22 L	Quarry 3	Heavy equipment malfunction	Equipment repaired; contaminated soil was taken to Quarry 6	N
2010-07-18	Oil	5 L	AWPAR KM 34	Problem with compressor during transport from BL to MB	Contaminated soil was taken to Quarry 6	N
2010-07-29	Hydraulic Oil	40 L	Bay Goose dike	Hydraulic hose broke on a 777HTR	Contaminated soil was taken to Quarry 22	N
2010-07-30	Hydraulic Oil	25 L	Bay Goose dike	Hydraulic hose broke on a D9T	Contaminated soil was taken to Quarry 22	N